

Title (en)  
Multi-photon imaging installation.

Title (de)  
Multiphotonabbildungsvorrichtung

Title (fr)  
Dispositif d'imagerie multiphotonique

Publication  
**EP 1207387 A1 20020522 (EN)**

Application  
**EP 00403238 A 20001120**

Priority  
EP 00403238 A 20001120

Abstract (en)  
An installation is provided for multi-dimensional non-linear imaging of a material comprising intrinsic chromophores, using laser scanning. This installation comprises i) at least one source (115) of time stamp pulses of synchronized photons, ii) means (12-14) for locally focusing the pulses on a material to cause its intrinsic chromophores to absorb groups of at least two synchronized photons to produce response photons, iii) means (22,40,53) for directing the response photons to at least one collecting zone, iv) means (30-34) for collecting the response photons in the collecting zone(s), whatever their energy, v) processing means for converting the collected photons into data at least representative of their number and storing them in correspondence with at least the time stamp pulses that cause the material to produce the response photons, vi) means for scanning (11,20) the pulses through a chosen area of the material, and vii) means for delivering from said data stored an image representative of said material chosen area, with a sub-millimeter resolution, and in function of the respective time stamp pulses of data. <IMAGE>

IPC 1-7  
**G01N 21/64**; **G02B 21/00**

IPC 8 full level  
**A61B 1/00** (2006.01); **A61B 3/10** (2006.01); **A61B 3/12** (2006.01); **A61N 5/06** (2006.01); **G01N 21/64** (2006.01); **G01N 21/65** (2006.01); **G02B 21/00** (2006.01); **G02B 23/24** (2006.01)

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**G01N 21/6458** (2013.01 - EP US); **G01N 21/6486** (2013.01 - EP US); **G02B 21/0024** (2013.01 - EP US); **G02B 21/0076** (2013.01 - EP US); **G02B 21/0084** (2013.01 - EP US)

Citation (search report)  
• [XA] WO 9711355 A1 19970327 - CORNELL RES FOUNDATION INC [US], et al  
• [A] WO 9006718 A1 19900628 - MASSACHUSETTS INST TECHNOLOGY [US]

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**EP 00403238 A 20001120**; AU 3167502 A 20011120; CA 2429332 A 20011120; EP 0114403 W 20011120; EP 01991805 A 20011120; JP 2002542854 A 20011120; US 44102703 A 20030520